

REMARKS/ARGUMENTS

Reconsideration of this patent application is respectfully requested in view of the foregoing amendments, and the following remarks. Claims 8-13 are in the application. Claims 8-13 have been amended. The specification and abstract have also been amended. No new matter has been added.

The Examiner objected to the specification for lacking proper headings. Applicant has amended the specification to add the proper headings. The Examiner objected to the abstract for being too long. Applicant submits a shortened abstract herewith.

The Examiner objected to claims 8-13, stating that it was unclear whether only the annular gap seal was being claimed, or the combination of piston, valve, cylinder and annular gap. Applicant has amended the claims to claim the combination. Applicant has also amended the claims to delete the unnecessary reference numbers.

The Examiner rejected claims 8-13 under 35 USC 102(b) as being anticipated by Bosch. Applicant respectfully traverses.

Bosch discloses an exactly rectangular groove for the annular gap seal. Such a design is only practicable for embodiments whose piston is always limited by a cylinder wall in the area of the seal, so that an egression or elusion of the seal out of the groove is prevented. The lack of an undercut groove according to Bosch is a result of the field of application, namely an operation piston of a compressed air brake.

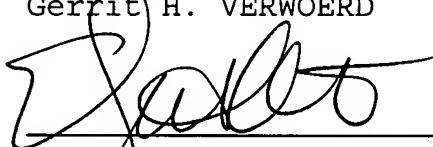
In contrast to this, the present invention claims an annular gap seal designed for valves, which are used in cases where the groove with integrated seal is typically not covered by a corresponding component. The present invention claims that the groove has an axially projecting peripheral lug on both sides, which presses against the sealing shoulder of the first sealing ring.

The advantage of the presently claimed annular gap seal is the improved sealing effect. This is achieved by the fact that the sealing rings do not only lie against a radial area of the groove (corresponding to the sealing surface (29)), but also against the area of the adjacent sealing shoulders, which corresponds to the peripheral lug. The one-piece design of the

sealing rings avoids possible leakages in the contact area of these components. Because of the long sealing area resulting from the successive areas of the groove wall and the peripheral lug, fluid cannot pass through the sealing ring and the groove wall starting from the bottom of the groove.

Accordingly, Applicant submits that claims 8-13 are patentable over the cited reference. Early allowance of the amended claims is respectfully requested.

Respectfully submitted,  
Gerrit H. VERWOERD



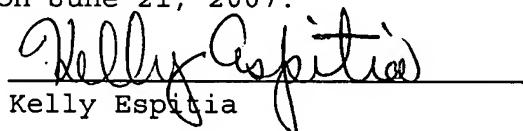
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Enclosure: Abstract

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop: Amendment, Commission for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 21, 2007.



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